

The World — in 2015 — According to Laura Herndon

Electrical engineer Laura Herndon (5220A) is the first to admit she has one of the most enviable jobs at Sandia. "My task is to read, read, read about the 21st century — what it holds politically, socially, and economically," she says. "Then comes the hard part: distilling and writing."

Laura is sorting out what U.S. (and some European) experts say, write, and guess about the world as it'll be 15-30 years from now — and shaping those predictions into three chapters of a comprehensive report, "Future Look." The ultimate goal for her part of the study (due six months from now) is to describe global trends and public attitudes likely to affect the defensive posture of NATO countries.

Scope: Global to Specific

Her task goes from general to specific. First chapter: an overview of global issues — a quick look at where the world is going (that's the segment she's working on now; see "Tomorrow's Tentative Trends" story). Second: a breakdown by geopolitical region (Latin America, Eastern Europe, Middle East, etc.). And third: a concentration on developments having a foreseeable impact on non-strategic nuclear forces (NSNF) — the tactical and theater nuclear forces that are, in general, deployed outside the U.S., particularly in NATO countries.

But, although there's a hefty dose of futurology in Laura's topics, she's not rewriting *Megatrends* (John Naisbitt's book on the high-tech society in America). The second and third chapters of her report will tackle some specific topics such as state-sponsored terrorism, aftereffects of the Chernobyl accident, religious fundamentalism, border tensions, peace movements, and the fate of welfare programs. These topics lead into later chapters on improved ways of keeping weapons ready while also protecting them from unauthorized access or use.

Reaching Agreement on Paper

Laura's part of "Future Look" is based on the open literature: whatever is printed in newspapers, periodicals, and books — or is said publicly.

She began her project two years ago in Washington, D.C., by compiling a list of references based
(Continued on Page Six)



BY GAZING INTO THE 21st CENTURY, Laura Herndon (5220A) ponders the "what ifs" that may change the requirements for weapon protection systems in coming years. "I can't read a newspaper without looking for trends that I can list in 'Future Look,'" she says. "It may be an item on arms control or protests in NATO countries — either way, it makes me stop and think."



LAB NEWS

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Robert Reminisces

Former VP Recalls Manhattan Project, Early Days at Sandia

Former VP Bob Henderson was there: at Los Alamos when the Manhattan Project was in full swing, and at the fledgling Sandia when it was established as a branch operation of Los Alamos Laboratory in the mid-40s. Bob, who retired on Jan. 31, 1974, recalled his experiences during the early years at a recent Sandia colloquium.

The U.S. nuclear weapons program was born in academia, Bob explains, and physicist Ernest Lawrence of Berkeley Radiation Laboratory was the kingpin. Bob was an Academy Award-winning engineer (for special effects) at Paramount Pictures in Hollywood when Lawrence recruited him for the Manhattan Project.

"Lawrence recruited heavily in Hollywood; you might say he 'raided' the place," says Bob. "Why Hollywood? Because a lot of scientific types there — mechanical, electrical, and optical engineers, for example — were out of work. He said to me 'I wish I could tell you what you're going to do, but I can't; I guarantee, though, that I'm going to change your life.' Truer words were never spoken!"

Around the Clock

The work schedule for people at Los Alamos was around the clock; many involved in the Manhattan Project worked through the night in labs, then caught a few hours of sleep during daylight hours. At first, the situation caused a real clash between military honchos and civilian scientists.

"The project was mostly staffed at the technical support level by military men and women in uniform," says Bob. "Some of the military types would work in labs until 4 a.m., then go home for some sleep. Next thing they knew, some joker would roust them out of bed at 6 for reveille. Oppie [Robert Oppenheimer, director of the Los Alamos portion of the Manhattan Project] soon put a stop to that kind

BOB HENDERSON (right) was in line to shake hands with John F. Kennedy when the President visited Sandia in 1962. Labs president "Monk" Schwartz looks on.



(Continued on Page Five)

Antojitos

Meanwhile, Back at the Branch On May 8, I mentioned the term "Livermore Branch" and decried the image of a tree with one lonely protuberance. SNLL retiree Don Gregson takes issue with the issue I raised in that issue. His visualization of the "Livermore Branch" was inspired by Bob Peurifoy's (7000) reference (in a long-ago Albuquerque Tribune interview) to Livermore as a "branch lab." "I reasoned," writes Don, "that we should have our own logo and stationery -- and what could be more appropriate than a branch from a grapevine?"



Don's guidelines for using the letterhead: "NEVER place important information immediately below the Livermore Branch chicken" (far right) and "ALWAYS place the chicken out on the end of the limb."

Power, Flower and Pulsed The Pulsed Power Sciences folks -- more specifically, the management thereof, most specifically the wife of the director -- honored the security inspectors assigned to Area IV last week with flowers and brownies. "Nancy and I and several of the other folks in 1200 have wondered whether anyone really appreciated the guards," says Pace VanDevender (1200). "After their fine showing in the I&E audit, we decided that this is a good time to show our appreciation."

More Semantic Shenanigans? A New Scientist article on renewable energy projects in the U.K. claims that "the world's first vertical wind axis turbine [was] inaugurated in Carmarthen Bay last November." Well, maybe so. After all, Sandia's version is the vertical axis wind turbine, or VAWT, not VWAT. If the Brits are really tapping only vertical winds (downdrafts?), it may well be the first -- and last.

P.S. from Last Issue Lee Orear (6315) of stupid-chain-letter-exposé fame is OK; got a postcard to that effect last week. ●BH

El que no se arriesga no cruza el mar. (One who does not take a risk does not cross the ocean, or "Nothing ventured, nothing gained.")

SNLL Bond Winner



TO PROMOTE the 1987 Savings Bond campaign, a \$50 bond was given away at a random drawing that included the names of all Sandia Livermore employees who signed up during the campaign. Bond drive chairperson Sharron Norris (8024) and vice-chairperson Paul Van Dyke (8186) drew the name of Tom Mays (8413).

Sympathy

To Gene Arndt (7172) on the death of his father-in-law in Sulphur, La., April 29.

To Ron Haines (7171) on the death of his father in Wilkes-Barre, Pa., May 24.

To Elaine Torres (7132) on the death of her father in Albuquerque, May 28.

To Jim Reed (7473) on the death of his mother in Canton, Ill., May 30.

To Howard Gipson (7171) on the death of his father in McAllen, Tex., June 2.

To Betty Walkup (7212) on the death of her father-in-law in Texas, June 2.

To Roger Hagengruber (9000) on the death of his father in Wausau, Wis., June 6.

Order Out of Chaos



The masses should remember that the experts in a new and fast-moving area of science are not people who are usually right -- they are people who are usually wrong, albeit less wrong than the

rest of us.

New Scientist

LAB NEWS

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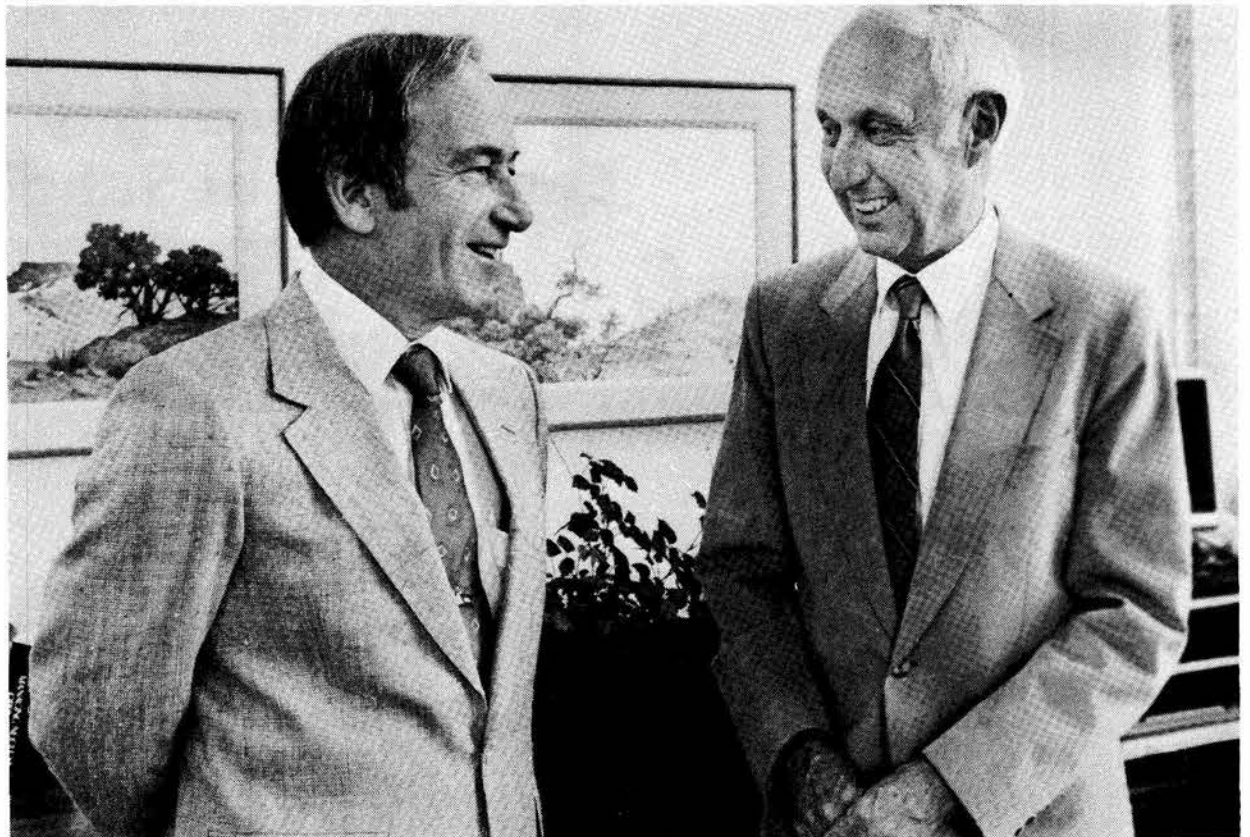
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NEWEST MEMBER of Sandia's Board of Directors, Sol Buchsbaum (left), Executive Vice-President, Customer Systems, AT&T Bell Labs, visited with President Welber early this week. Other non-Sandia members of the current Board are Ian Ross, President, AT&T Bell Labs; Tom Thomsen, President, Technology Systems Group, AT&T Technologies, Inc.; and John Zeglis, Senior Vice-President and General Counsel, AT&T Technologies, Inc. Board members from Sandia are Welber, Orval Jones (20), and Lee Bray (30). Buchsbaum, VP of Research at Sandia from 1968 to 71, was recently awarded the National Medal of Science for his contributions to national science and technology policy as well as for his studies of solid-state plasmas. The award was presented by President Reagan.

Sandia Livermore Says Good-Bye To Dick Claassen



MANAGEMENT, PAST AND PRESENT — Attending Livermore VP Dick Claassen's farewell reception May 28 were (from left): Peter Mattern (8300), Rick Wayne (8400), retired 8400 Director Leo Gutierrez, retired Executive VP Tom Cook, Dick, Ron Detry (8200), Gene Ives (8100), and Arnold Schuknecht (8020).



ONE OF THE MEMENTOS presented by Walter Bauer (8340) depicted the Embedded Atom Method and symbolized the pinning of a dislocation by helium clusters.



PLAQUE commending Dick for his support of materials work at Sandia was presented by Dick Rohde (8310).

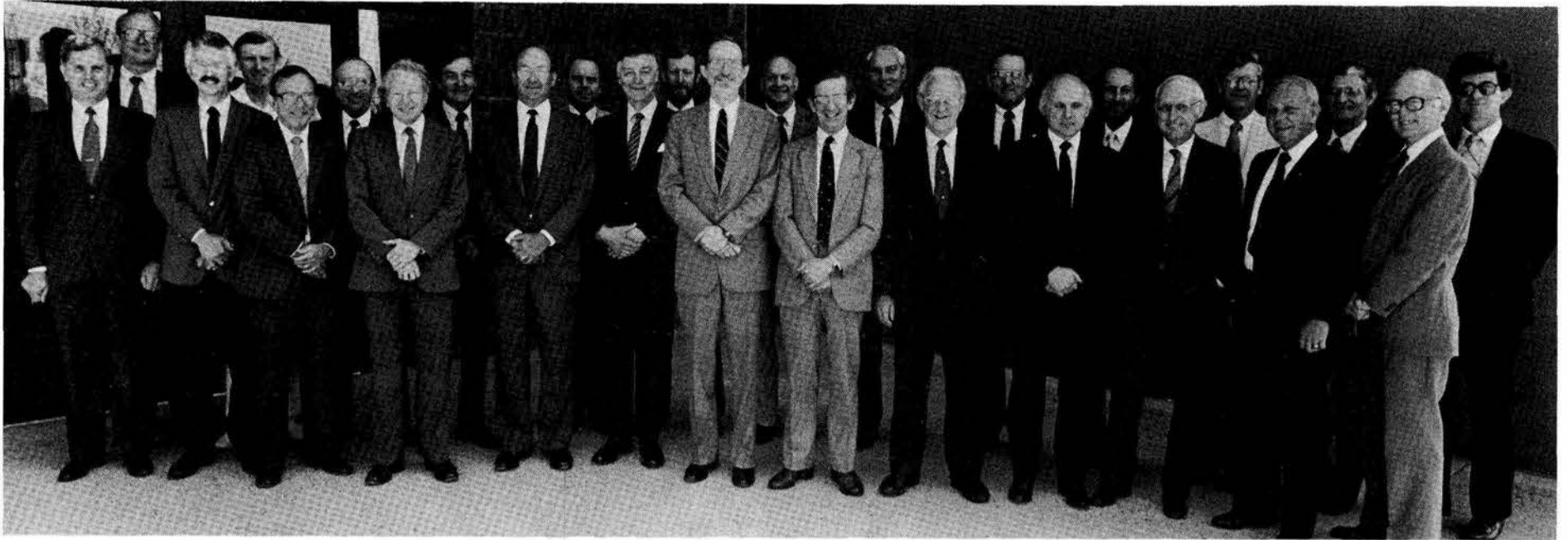


SCANNING his memory book, Dick was joined by his wife Ruth and party emcee Rick Wayne (8400).



PERSONALIZED SERVING TRAY containing symbols of all the programs at Livermore was a gift from all Sandia Livermore employees. Dick said the tray will be given a prominent place in his home.

Stocktake Held at Sandia Albuquerque



PARTICIPANTS IN 18th "STOCKTAKE" meeting, held at Sandia: (from left) Frank Wagner, DoD - Spec. Asst., Office of ATSD/AE; John Birely, LANL - Deputy Dir. of Defense; Sig Hecker, LANL - Dir.; John Cooper, MOD - Chief Strategic Systems Exec.; Larry Woodruff, DoD - DUSD/STNF; John Rudolph, DOE - Dir. Program Support, OMA; Bob Ridley, MOD - Asst. Chief Scientific Adviser; Ray Romatowski, DOE - Mgr., AL; Bob Barker, DoD - ATSD/AE; Ken Malley, DoD - Dir. SSPO; Jim Barnes, MOD - Deputy Chief Scientific Adviser; Peter West, MOD - Head, ACOW; Jim Culpepper, DOE - DASMA, acting; Roger Batzel, LLNL - Dir.; Don Spiers, MOD -

Controller, Establishments Res. and Nuclear; John Fogarty, DOE - U.S./U.K. Coord.; Peter Jones, MOD - Dir., Atomic Weapons Res. Establishment; George Marburger, DoD - Spec. Asst., Office of ATSD/AE; John Maberley, MOD - Deputy Controller, Nuclear; Troy Wade, DOE - Mgr., Idaho Operations; Irwin Welber, SNL - Pres.; George Miller, LLNL - Assoc. Dir. for Defense Systems; Tom Clark, DOE - Mgr., Nevada Operations; Don Linger, DoD - Dir. for Test, DNA; Jim Mogford (400), SNL - U.S./U.K. Coord.; and Everet Beckner, SNL - VP for Defense Programs 5000.

For the first time in history, a Stocktake meeting was held at Sandia, on April 29. High-level government officials from the U.S. and the U.K. met for the 18th time since 1958 to share information on uses of atomic energy for mutual defense.

Named with a bit of reverse English, Stocktake involves a periodic update on U.S./U.K. interaction occurring under a bilateral agreement reached almost 30 years ago.

Stocktake meetings are usually held in London or in Washington, D.C. This was only the second Stocktake to be held at a national laboratory in the States — LLNL provided facilities three years ago, according to U.S./U.K. Coordinator Jim Mogford (400).

This year's roster of Stocktake participants included government officials from DOE: the Acting Deputy Assistant Secretary for Military Applications (DASMA) and the Director of Program Support for the Office of Military Application (OMA) — and from the DoD: the Assistant To the Secretary of Defense for Atomic Energy (ATSD/AE) and the Deputy Undersecretary of Defense (DUSD). The Ministry of Defence (MOD) designated participants from the U.K.

Top representatives from government laboratories in both countries regularly attend Stocktake

meetings to provide input. This year was no exception. President Welber touched upon weapons effects technology, and the directors of LANL and LLNL gave their perspectives on their specialty, the nuclear package within a weapon.

U.K. officials occasionally visit Sandia and other national laboratories and defense-related facilities for

meetings not connected with Stocktake, adds Jim. Also, joint working groups (JOWOGs) that include participants at middle-management-level and below from the national laboratories meet throughout the year to exchange technological information, according to Jim Powell (1230), U.S. chairman of the JOWOG on radiation effects. ●ID

In Charge of Logistics

"Sandia provided facilities and also coordinated the logistics for this year's Stocktake conference," says Jim Mogford (400). And DOE's Albuquerque Operations hosted a visit to the WIPP (Waste Isolation Pilot Plant) site; Sue O'Niell (DOE/AL) made those arrangements. Dick Lynch, director of Nuclear Waste Management and Transportation 6300, and Wendell Weart, manager of Waste Management Technology Department 6330, accompanied the group and provided a project engineering viewpoint of the waste disposal project.

Stocktake negotiations were conducted in Labs buildings 960 and 980; the conference rooms were specially prepared by Plant Engineering's

Planning Division 7864. "Collective kudos go down the line to Mike Nielsen, Bill Gamberale, and John Eisenberger for a top-notch job in providing the required accommodations," says Jim.

Security provided for Stocktake was also special. "My hat's off to Jerry Brown [3432] for his work on the security plans and to Capt. Bill Wolf [3434] for implementing them," Jim notes. "The entire security operation can only be described as sharp."

Credit for other arrangements goes to Chris Roan (3743) for organizing dinner in town; Debbie Hay (123) for taking charge of details in Bldg. 960; Kip Stanley (1240) for Bldg. 980; and Jim Davis (3423) for local transportation.

Medical Corner

Rumors About Alcoholism/Drug Abuse Program Untrue

by Lynne Judge (3330)



Heard the rumor? "All Sandians who even just show up at the Alcoholism/Drug Abuse Program offices lose their security clearances."

Wrong!

It's an exceptionally vicious rumor because of the scope of its implications. It implies that even if you're not involved with drugs and alcohol yourself, but are merely associated with someone who is — family member, friend, co-worker — and come to the program for help, your clearance will be revoked.

Wrong again!

That's the rumor. Here are the facts. The Alcoholism/Drug Abuse Program was established at Sandia in 1972. The purpose of the program was then, and is now, to help alcoholics/addicts get treatment for their disease, keep their jobs (including their clear-

ances), and save their lives.

The program also serves family members who are affected by the alcoholics/addicts in their lives. Since 1972, 1047 employees have come through our program. Of those, 488 were alcoholics/addicts and 559 were family members.

Yes, employees have been terminated after being accepted into the program — but rarely; they're fired only when all other options have been exhausted. What gets them fired? Repeated failures to rehabilitate, failure to respond to treatment, or, perhaps, serious violations of state or federal law.

Sandia understands that alcoholism, drug addiction, and co-dependency are diseases that need treatment (see LAB NEWS, May 22, 1987). Sandia therefore offers, as a part of its benefits package, insurance coverage for treatment and sick leave benefits to help employees get well.

However, the program cannot force people to get well if they choose not to. A couple of employees

have gone through our program with no intention of getting well. They not only abused liquor and drugs; they also abused our medical and sick leave benefits, caused their supervisors innumerable problems, and created serious morale problems with co-workers.

One person, for example, kept this game going for quite some time. Those of us in the alcoholism program tried everything we felt had any chance of success, but the person didn't want to change. The result was termination.

Alcoholism and drug addiction are devastating diseases that always get worse, never better, without treatment. It's sad to think that people who need help don't seek it because of a rumor. It is even sadder when people who have these diseases believe they can protect their jobs by hiding the disease.

After all, the disease is more powerful than the person — it will inevitably cause a person to behave in such a way as to jeopardize the job anyway.

If he, or she, doesn't die first.

Early Days

of nonsense; he was remarkable about getting his own way — very persuasive, to say the least.”

No management hierarchy existed at Los Alamos. People were assigned to project groups with group leaders and alternate group leaders. Oppenheimer, following the same system that Lawrence used at Berkeley, decreed that titles meant nothing — everyone would be called by their first names. Nobody was called ‘doctor,’ and people working on the project were free to speak their piece at meetings, whether it be to the director or a peer. “There wasn’t a formal chain of command, so it was free and easy all the way through,” Bob remembers.

Bob rubbed elbows with many people at Los Alamos, some of whom would play key roles at the small branch in Albuquerque that would later become Sandia. His recollections:

● Niels Bohr, Danish physicist — “Head as big as a basketball. Had to keep him ‘locked up’ in Los Alamos throughout the war because he would be easily recognized outside.”

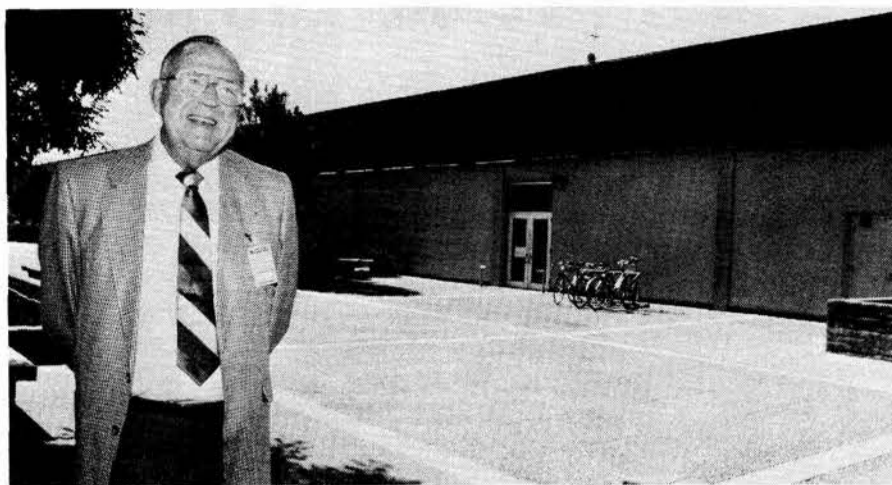
● Gen. Leslie Groves, director of the nationwide Manhattan Project — “Had an innate ability to get what he wanted — by devious means. Once told me ‘I get ‘em [project people] mad, listen to ‘em fight, then draw my own conclusions.’ An effective management style, although brutal.”

● Roger Warner, later Sandia director during the doldrums between the Manhattan Project and AEC management — “A real wheeler-dealer — a good logistics man. He was there to work out transition details — how to get bombs built in New Mexico to target areas in Japan.”

● Jim Fisk, former director of research for the AEC and future president of Bell Labs — “A key link when the Sandia/Bell System connection was being established in 1949.”

In early 1946 Norris Bradbury, who succeeded Oppenheimer as Los Alamos director after the war, asked Bob to head up a branch lab in Albuquerque. (Los Alamos needed the housing and other facilities used by the engineers, and the engineers wanted to be closer to aircraft support.) There were plenty of headaches in those early days, not the least of which was housing for Sandia branch employees.

“Housing was virtually unavailable in Alberquer-



WINDOWLESS BUILDING 880 (behind Bob Henderson) was originally supposed to be a warehouse. When the building’s architect heard that engineers were moving into 880 in the early 50s, he said, “That building is not fit for human occupancy.” Regardless of his feelings, people have occupied the building ever since.

que,” Bob recalls, “so it was brought in from Fort Leonard Wood [Missouri] and set up on Sandia Base [now Kirtland], where the branch was located. And what housing! Temporary pre-fab plasterboard. After a snow storm or a wind storm when the sand blew around a lot, there’d be one-and-a-half-inch piles of the stuff on the floor the next morning.”

During the late 40s, the University of California regents became increasingly unhappy about managing Sandia, according to Bob. They didn’t want to be involved in ordnance engineering or anything related to out-and-out, big-money production activities. So the search was on for “our new den mother,” in Bob’s words.

Jim Fisk, later president of Bell Labs, suggested to the AEC that someone do a survey of the entire Los Alamos operation to determine what should be done about the Sandia branch; he also suggested that Mervin Kelly, Bell Labs VP, would be a capable choice to do the survey. AT&T agreed to the loan of Kelly for the survey, but stipulated that he do it as an individual — not as a BTL VP — and that his report to AEC be verbal; there was to be nothing in writing.

Following Kelly’s recommendations — and subsequent negotiations between AT&T President Leroy Wilson and the federal government — a press release in July 1949 announced the Bell System would take over Sandia management.

“We had some real problems when George Landry, our first president, arrived in November,” says Bob. “George was a company man — a by-the-book Western Electric manufacturing type. He abolished the group/group leader system we had

from Los Alamos days and replaced group leaders with ‘supervisors.’ That went over like a lead balloon, because we just didn’t go much for a hierarchical system around here.”

People Weren’t Buying

“He [Landry] walked in blind; he knew only what Mervin Kelly had told him,” Bob continues. “He faced a whole set of existing rules of conduct that were foreign to him, so he tried to work out problems with supervisors at sandwich lunches on the second floor of Bldg. 802. But when he started talking about climbing ladders in the hierarchical system, the meetings broke up in near-riots; people just weren’t buying. To this day, I don’t know how WE — and George — got those early ideas on how to operate Sandia; they just weren’t working.”

Things smoothed out when Donald Quarles of Bell Labs took over the Sandia reins in 1952, according to Bob. “He was a real jewel — a delightful guy who didn’t make waves,” says Bob. “He was here just a little over a year when he was appointed Assistant Secretary of the Air Force, but that year was a turning point for Sandia.”

During a Q&A session following Bob’s talk, he covered items such as where Sandia got its name, Bldg. 880’s designed use — a warehouse — and the architect’s comment when 880 eventually housed people: “That building is not fit for human occupancy.”

A videotape of Bob’s colloquium talk is available at the tech library. ●PW

Take Note

The 4th Annual Sandia Mountain Discovery Day is June 27. This is a chance to find out about the wildlands just outside our back door. The all-day activities are sponsored by the U.S. Forest Service and Volunteers for the Outdoors. Events begin at 6 a.m. with birdwatching at the Capulin snow-play area; most events, beginning with an orientation at 9 a.m., take place at the Sandia Peak Ski Area Day Lodge. The last activity starts at 4:15 p.m. For more information, contact Neel Marsh at the U.S. Forest Service on 281-3304.

Joe Laval (3163) was one of the 800,000 people who showed up in San Francisco last month to walk the Golden Gate Bridge on its 50th birthday, and he was one of the 250,000 who actually made it onto the bridge. But not across — just too many people, he reports. Joe had a special reason for wanting to join the celebration: He had walked the bridge 50 years ago with his grandfather, Luigi Bellochi, who had worked on the tunnel and approach roads on the Marin County end of the bridge.

Mike Shipley (2115) has a support role in Wool Warehouse’s current production, Neil Simon’s “Brighton Beach Memoirs.” He plays an older brother in the autobiographical show, which runs through July 12. Reservations at 247-1909.

Last issue’s item on Saturday Night Wild at the Rio Grande Zoo contained some errors. Tomorrow’s

KAFB’s “Spirit ‘87” is an all-day event that starts at 10 a.m. on July 4. The day features music shows, demonstrations, jugglers, magic shows, flea market, bingo, games, contests (including a 200-person tug-of-war), food and drink, and aircraft on display on the flightline. And more: Sen. Pete Domenici will swear in 50 new American citizens. The N.M. Symphony Orchestra provides a pops concert at 8:30 p.m. with an AF jet flyover as the opener. The concert and a fireworks display (custom-designed by Paul Austin, producer of last summer’s Statue of Liberty display in New York Harbor) will be broadcast live by KGGM TV 13. During the fireworks, the Symphony will perform Tchaikovsky’s “1812 Overture,” accompanied by cannon fire. Admission to the Base and to all events is with a Spirit ‘87 button (\$1/person) available at the Carlisle and Truman gates (the only gates open to the public) on the Fourth. Buttons may be purchased in advance from Kirtland Federal Credit Union (just west of the Louisiana gate) and Que Pasa Rec Center.

A poster prepared and presented by Frank Burns and Phil Rodacy (both 1821) at the 35th ASMS Conference on Mass Spectrometry and Allied Topics, held recently in Denver, won (out of 424 posters) a blue ribbon for being the best presentation in the Computational Techniques/LCMS Instrumentation session. The poster is on display in Bldg. 805, Rm. 310.

event includes Linda Cotton, Sweet Adelines, belly dancers, yodelers, cloggers, magicians, clowns, children’s mask contest, games, and food from 6 to 10 p.m. Knights and ladies from the Society for Creative Anachronism will welcome adults to their Fight-A-Knight game. Admission is \$3/adults, \$2/children ages 3-11 and senior citizens. Free admission for children under 2 and children under 12 wearing masks. Park-N-Ride is available at 5th and Lead with a shuttle to the zoo and back for \$1/person. Capacity is 7000; buy advance tickets at the Zoo tomorrow between 9 and 4. For more information, contact Merri Lewis (1131) on 268-5025.

Public tours, led by trained volunteers, are being offered Thursdays, Saturdays, and Sundays throughout the summer at the New Mexico Museum of Natural History. The 90-minute tours, included in the price of admission, begin at 1 p.m. in the atrium. Museum summer hours are 10 a.m. to 6 p.m. For more information, call the Museum on 841-8837.

And Seeing Stars After That?



Your next eye test may put spots instead of letters in front of your eyes. A new test, which evaluates the eye’s sensitivity to contrast, is challenging the familiar letters of the current eye test, which measures the eye’s ability to focus — but does not measure how well the eye can discern objects of low contrast, such as a road sign at night.

World — in 2015 — According to Laura Herndon

on talks with people at institutions and think tanks — Georgetown University's Center for Strategic and International Studies, the National Foreign Policy Association, the National Institute of Public Policy, and the Brookings Institute.

"There are many experts, and I'm trying to give their ideas a fair shake," she says. "Yet their images range from apocalypse and the utter self-destruction of the human species to utopia and the flowering of humanity."

Although she's been reading volumes, she won't write volumes. Her task is to look for majority consensus. Where there is no agreement, she concentrates on the "middle-of-the-road" position and then outlines the extremes. She also tries to separate trends from policy, data from conclusions, and ongoing developments from visionary guesses. And to pick the important issues: "the ones that will affect every person on earth, whether he or she lives in Cairo, Kiev, or Cleveland," she says.

Part of Brainstorming Team

Laura is teamed up with a number of Sandians for "Future Look." "She's got a clean disk to write on," says Andy Lieber, manager of Survivability Systems Department 5220, the organization in which work on "Future Look" is centered. "That is, she's not tied down to current policy, politics, practices, technology. And, if the data support it, the team can project entirely new requirements for systems in all those areas. In effect, we're fixing problems that haven't occurred yet."

Funded jointly by DOE's Office of Military Application (OMA) and the Defense Nuclear Agency (DNA), the brainstorming study is addressing the security and survivability of NSNF in the 21st century. Those two concerns are defined as:

- Security — preventing unauthorized access in any form to nuclear weapons and anything directly related to them;

- Survivability — frustrating enemy plans or actions designed to prevent the authorized use of weapon systems as and when intended.

"Future Look" is intended not only to devise innovative concepts for security and survivability but also to project the nature of the threat to those two concerns in the 21st century.

That's where Laura's study comes in. "It's important to know as much as possible about how the character of NATO might change in the next 15-30 years," says Andy. "What will be the economic conditions? Will terrorism be more rampant? What will be the political and public attitudes toward nuclear weapons? What treaties may exist?"

Laura's work probably won't answer any of these questions specifically. But it will provide a general framework for the "Future Look" team to consider and will call attention to the range of possibilities that can bear on the work of the team.

Regular Briefings

"Future Look" was initiated at the request of Richard Wagner, when he was the Assistant To the Secretary of Defense for Atomic Energy (ATSD/AE). The project continues under the sponsorship of that office, now under Robert Barker. Work in progress,

including new concepts, is communicated regularly to several responsible committees, including NATO's Senior Level Weapon Protection Group (SLWPG) — which met here in April (see LAB NEWS, May 8, 1987).

"Future Look" is not the first time Sandia has been asked to apply itself to this particular area. Its forerunner is "Forward Look" (see "Looking Back" story). Both studies are intended to identify deficiencies and vulnerabilities and to recommend "fixes." But "Future Look" has more leeway for recommendations than its forerunner had: The Sandia team may either suggest totally new concepts or identify important technologies that should be developed further.

Author's Inward Look

Laura isn't limiting her writing just to "Future Look" these days. At home she's busy writing a screenplay about her Dad, who contracted polio during the 50s, when the disease struck many adults as well as children. "Heart of the Oak" is also a story of her Mom and the entire family's ultimate triumph.

As a futurologist, does she predict when the play will reach the big screen? "Oh, it'll be years before I have a movie," she says, laughing. "Anyway, who knows what the future will bring? In the meantime, I'm learning a lot about the movie industry."

Laura joined Sandia eight years ago as a new hire in Access Denial Technology Division (now 5257), then earned her master's degree through the OYOC (One Year On Campus) program at Stanford. ●ID

Chapter One Distilled

Tomorrow's Tentative Trends

Laura Herndon (5220A) is not yet ready to publish her report, part of the larger "Future Look." It'll take about six more months to get it ready (the remaining studies by other Sandians will be published in several segments over the next two years).

But in mulling over some of the larger issues for chapter one during the past two years, she's tracked down some trends from now to 2015:

People

- Population growth will continue to slow down around the world, with the birth rate in the West falling even further below replacement level (zero growth). This means fewer people available for armed services, industry, and the tax base.

- Immigration will become even more of a "filler" for the labor force in U.S. (where the birth rate is now 1.8 per female).

- The world will have 6 billion people by the year 2000, with most of the 1 billion increase coming from LDCs (less developed countries).

Supplies

- Food supply will increase overall, but distribution will continue to vary from country to country. War and other disruptions in LDCs, not poverty, will often be the problem.

- Water and minerals will be plentiful. But again, distribution will continue to vary.

- Oil supplies will last beyond 2015, but reserves lie in politically unstable areas. Alternative energy sources such as nuclear power (and coal, synthetics, solar power) can fill in for some regional shortfalls and will become more impor-

tant as the end of the petroleum age approaches.

Nature

- Environmental disruptions will remain regional, not global (no anticipation of a "greenhouse" effect or total deforestation, at least not within this relatively short, 25-year period). However, concern about environmental damage will occasionally act as a restraint on development.

Economics, Interactions

- More middle-income nations will emerge. Many LDCs will grow rapidly as most industrialized countries slow down, leading to the emergence of interacting, regional powers less influenced by today's two superpowers.

- Labor-intensive Asia will have a greater influence on the world market, with Taiwan, South Korea, Hong Kong, and Singapore vying for Japan's strong lead. The Philippines, Indonesia, Malaysia, India, and China will also try to increase production.

- Latin America, Mexico, Brazil, and Argentina will try to overcome their debt burdens and become leading economic powers.

- The U.S. economy will remain the world's largest and will continue to grow at a moderate pace (with a 50-year boom predicted to begin in 1995). Yet U.S. production will decline with respect to the rest of the world.

- The prospects for economic progress in Eastern Europe and the U.S.S.R. are not good.

- Canada and Australia will do very well in their standards of living.

- Western Europe will be slow to recover in world commerce.

- Changing social values will limit economic growth in the West. The work ethic — the idea that greater affluence is all-important — will be on the downswing. Citizens in highly industrialized countries will no longer believe there's a need to work so hard. Instead, they will concentrate on personal or social fulfillment (including comprehensive health care and a better society — taking part in humanitarian, environmental, or pacifist "causes," or returning to organized religion).

- People employed in the media, academia, and entertainment fields — a "symbolist class" — will exert great influence via words, pictures, and ideas they select.

Tools, Techniques

- Today's new technologies will be tomorrow's mainstay:

- biotechnologies (some genetic engineering of human fetuses, plant strains, and farm animals);

- synthetic fuels (replacements for petroleum);

- new materials (metallic compounds, ceramics, fiber graphites, polymers, composites, superconductors, crystals, and conductive plastics);

- large communication and computer networks;

- robotic systems (automated workforce);

- novel medical techniques and equipment (bionic parts, superdrugs, laser surgery, regeneration techniques for injured organs, programmable diagnostic machines); and

- advanced space vehicles (orbiting solar collectors, permanently manned space stations, colonies on the moon).

Looking Back at 'Forward Look'

Back in 1976, the DoD asked Sandia, as the lead DOE lab for security technology, to look at the upcoming 80s in terms of ensuring the safety, security, and survivability of theater nuclear weapons deployed in NATO countries. The Labs was to consider both the storage and the transport of those weapons.

"That 10-year time frame necessitated some special conditions," says Andy Lieber, manager of Survivability Systems Department 5220. "In recognition of the growing terrorist threat, security improvement programs had been initiated and, it was assumed, would be completed by 1980. Therefore, we were to 'second guess' the adequacy of those improvements. But, since the time was very near-term, any 'fixes' recommended had to apply to the then existing weapon systems and the real estate that comprised the storage sites."

(Today's study, "Future Look," is not constrained by current policy and practices. Totally new weapon systems and concepts may be considered — see "World in 2015" story.)

Named "Forward Look," the earlier study was also requested and sponsored by the ATSD/AE, who was then Don Cotter, a former Sandian. The work required about two years and involved 40 people-years.

The study itself was funded by the Energy Research and Development Administration (ERDA), DOE's predecessor. Several concepts that evolved during the course of study required the development of prototypes; this "hardware" work was largely funded by DNA.

Aftermath

There were many contributors to "Forward Look." "Some of them were highly disappointed," notes Andy, "because it seemed that our work met with a deafening silence. But the system moves slowly and they simply weren't patient enough."

"I recently listed the major findings and recommendations of 'Forward Look,'" Andy continues. "In nearly every case, our concept has



ANDY LIEBER (5220), dubbed "Father of 'Forward Look'" by Richard Wagner (ATSD/AE), oversaw the writing of 29 reports — some of them stamped 'Secret' — a decade ago. "The goal then was to fix existing problems in survivability, safety, and security," he says. Today, he's managing a follow-up study, "Future Look," where the goal is fixing problems that haven't occurred yet.

been adopted — or work is proceeding on some variation.

"I can mention a couple of the ones that we developed here at Sandia," he says. "One is WADS — Weapons Access Denial System — which makes it extremely difficult for adversar-

ies to actually lay hands on a nuclear weapon, even if they had managed to gain entry to a storage bunker. The other is a storage vault concept that simultaneously improves safety, security, and survivability while easing several operational problems for the Air Force. Both have been adopted."

Events Calendar

- June 19-22 — Exhibit, Isleta pottery by Stella Teller and family, 9 a.m.-6 p.m., Indian Pueblo Cultural Center, 843-7270.
- June 19-20, 26-27 "Lizard City Blues," two one-act plays by Jeff Hudson and Grubb Graebner; 8 p.m. Fri. & Sat.; Second Story Arts Center, Albuquerque Little Theatre, 243-1673.
- June 19-21 — Arabian Horse Show, all arenas, NM State Fairgrounds, 265-1791.
- June 19-28 — "True West," Sam Shepard's Southwestern classic; 8 p.m., Vortex Theatre (Central & Buena Vista), 247-8600.
- June 19-28 — "Diversions and Delights," one-man show on Oscar Wilde written by John Gay; 8 p.m. Thurs.-Sat., 6 p.m. Sun.; Keystone Theatre, 255-6819.
- June 19-28 — "Night, Mother," drama by Marsha Norman; 8:30 p.m. Fri.-Sun.; Corrales Adobe Theatre, 898-3323.
- June 19-July 26 — Exhibit, "Clay in '87," New Mexico Potters Association; upper gallery, UNM Art Museum, 277-4401.
- June 19-Aug. 2 — Exhibit, "Mickey McConnell: A Personal View of the Ancient World"; Jonson Gallery (UNM), 277-4967.
- June 20 — Summerfest '87: Juneteenth, including NAACP celebration of 124th anniversary of the signing of the Emancipation Proclamation; 5-10 p.m., Civic Plaza, 768-3490.
- June 21 — Sunday Jazz at Madrid: "Future Song Ensemble," "Hear and Now," and "The Three Sounds"; sponsored by New Mexico Jazz Work-

- shop, 3 p.m., Oscar Huber Memorial Ball Park (Madrid), 842-6659.
- June 21 — Custom Car Show, noon-10 p.m., Convention Center, 768-4575.
- June 23 — "Mayan Tales & Other Folklore," storyteller Judy Hatfield; 7:30 p.m., Maxwell Museum of Anthropology, 277-4404.
- June 24 — San Juan Feast Day, includes rooster pull; 9 a.m. at bottom of mesa, 2 p.m. on top; Acoma Pueblo, 552-6604.
- June 24 — San Juan Feast Day, midmorning mass, procession, and Comanche Dance; San Juan Pueblo, 852-4400.
- June 26 — Concert I, Santa Fe Desert Chorale, works by Bach, Mozart, and Schubert; 8 p.m., Keller Hall, 988-2282 or 277-4402.
- June 26-28 — "Kiss Me Kate," Albuquerque Civic Light Opera Association production of Cole Porter adaptation of Shakespeare's "The Taming of the Shrew"; 8:15 p.m. Fri. & Sat., 2:15 p.m. Sun.; Popejoy Hall, 345-6577 or 277-3121.
- June 26-28 — New Mexico Arts and Crafts Fair; 10 a.m.-10 p.m. Fri. & Sat., 10 a.m.-6 p.m. Sun.; New Mexico State Fairgrounds, 884-9043.
- June 26-28 — Paint Horse Show, Horse Arena, New Mexico State Fairgrounds, 265-1791.
- June 27 — Summerfest '87: Omatsuri, Japanese-New Mexican celebration; 5-10 p.m., Civic Plaza, 768-3490.
- June 27 — Daylily Show, sponsored by Alber-

- que Daylily Society; 2-6 p.m., Albuquerque Garden Center, free, 296-6020.
- June 28 — Sunday Jazz Comes to Civic Plaza, 4-8 p.m., free, 842-6659.
- June 28-30 — Exhibit, works by Victor Vigil, Jemez Pueblo sculptor; 9 a.m.-6 p.m., Indian Pueblo Cultural Center, 843-7270.
- June 28-July 27 — Exhibit, "Santa Fe Trail," photographs by Joan Myers, an exhibit of images along the 1500-mile journey from Missouri to New Mexico, sponsored by the Smithsonian Institution Traveling Exhibition Service; 11 a.m.-5 p.m. Tues.-Fri., 1-5 p.m. Sat. & Sun.; Albuquerque Museum, 242-4600.
- June 29 — St. Paul's Grab Day, including chicken pull (morning); San Felipe Pueblo, 867-3381.
- June 29 — Corn Dance, Santa Ana Pueblo, 867-3301.
- June 29 — St. Peter's Grab Day, 1-4 p.m., Santo Domingo Pueblo, 465-2214.
- July 1-3 — Exhibit, Celebration of Water Color III, juried; 9 a.m.-9 p.m. Mon.-Thurs., 9 a.m.-5:30 p.m. Fri. & Sat.; Main Albuquerque Public Library, 768-5116.
- July 1-4 — Art Windows on Route 66, art displays on storefront windows, primarily Nob Hill area; free, 256-2047.
- July 2 — "Great American Race," see classic cars entered in a race between Disneyland and Disneyworld, featuring Bonnie and Clyde's getaway car; cars arrive approximately 5 p.m., Ramada Classic Hotel, 881-0000.



RIGHT PHOTO: TONY SILL (2331), FRED HARTMAN (2321), and CHUCK CARSON (9012)

LEFT PHOTO: PETER WINOKUR (2147), CARL PETERSON (1520), PAUL GOURLEY (1143), JOHN KELLY (6418), and RICH PRESTON (9015)

Supervisory Appointments

PETER WINOKUR to supervisor of Microelectronics Materials and Processes Division 2147, effective May 1.

Peter joined the Labs in December 1983 as a member of the Advanced Microelectronics Development Division. His work has been on developing techniques to characterize and improve the radiation-hardness of CMOS technologies.

Before coming to Sandia, he was a research physicist at the Harry Diamond Labs in Washington, D.C. He has a BS in physics from The Cooper Union in New York, and an MS and PhD in physics from the University of Maryland. He is a member of the American Physical Society and IEEE.

Peter and his wife Karen have one child and live in the NE Heights.

* * *

CARL PETERSON to manager of Engineering Analysis Department 1520, effective April 16.

Carl joined Sandia in September 1969 as a member of the Aerodynamics Research Department working in fluid mechanics research. In 1973 he was appointed supervisor of the Experimental Aerodynamics Division, and then supervised the Parachute Systems Division from 1977 until his promotion.

He has a BS, an MS, and a PhD in aeronautical engineering, all from Princeton University. He is a member of the American Institute of Aeronautics and Astronautics.

Carl enjoys outdoor activities with his two children; he skis, jogs, plays soccer, and is active in church activities in his spare time. He lives in the NE Heights.

* * *

PAUL GOURLEY to supervisor of Semiconductor Physics Division 1143, effective May 16.

Paul has been a member of the Semiconductor Physics Division since he joined Sandia in March 1980. His work has included studies of optical properties of semiconductors and strained-layer superlattices.

He has a BS in physics from the University of North Dakota, and an MS and a PhD in physics from the University of Illinois.

Paul is a member of the American Physical Society, the Optical Society of America, the Materials Research Society, and IEEE.

In his spare time, Paul is active in Bible study, and competes in cross-country ski racing and hockey. He and his wife Gail have one child and live in the NE Heights.

* * *

JOHN KELLY to supervisor of Thermal/Hydraulic Analysis Division 6418, effective May 16.

John joined Sandia in September 1980 as a member of Reactor Safety Theoretical Physics Division 6425. He was an analyst on debris coolability studies and was project leader on the MELPROG core meltdown computer code development project.

He has a BS from the University of Michigan and an MS and a PhD from MIT, all in nuclear engineering. He is a member of the American Nuclear Society and the American Society of Mechanical Engineers.

In his spare time John enjoys camping and gar-

dening. He and his wife Suzanne (2645) have three children and live in the NE Heights.

* * *

RICHARD PRESTON, JR., to supervisor of Strategic Defense Studies Division II 9015, effective May 1.

Rich joined Sandia in January 1982 as a systems analyst in the Systems Analysis Division where he studied offensive strategic weapons systems issues. In 1986 he went to the Strategic Defense Division. Before joining Sandia, Rich worked for MITRE Corp. as a systems analyst in command, control, communications, and intelligence work.

He has a BS in mathematics from the University of New Orleans and a PhD in the same field from the University of Texas. He served in the Navy for two years.

Rich's spare time is spent on church activities, Boy Scouts, and youth sports. He and his wife Janyce have four children and live in the NE Heights.

* * *

ANTHONY SILL to supervisor of Command and Control Division I 2331, effective May 1.

Tony has been a member of the Safeguards organization since he joined Sandia in June 1976. He has worked on the DOE transportation network, entry control systems, and international safeguards applications and more recently on development of large, transportable command and control systems. Tony was Sandia liaison at the Defense Communications Agency in Washington, D.C., in FY 85.

He has a BS, an MS, and a PhD, all in electrical engineering, from the University of Wisconsin where he served as an instructor. He is a registered professional engineer and member of IEEE.

In his spare time, Tony enjoys photography, hiking, camping, and cross-country and downhill skiing. He and his wife Maureen have two children and live in the NE Heights.

* * *

FREDERICK HARTMAN to supervisor of Radiation Applications Division 2321, effective May 16.

Fred joined the Labs in July 1967 as a member of the Advanced Program Planning Division. In 1968 he transferred to the Analysis Division and performed work in the areas of UGT testing, radiation transport, and IEMP effects. In 1973 he moved to the Radiation Effects Division within the Microelectronics Department and became involved in studies on radiation effects in electronic devices. In 1975 he transferred to the Systems and Radiation Test Division and performed nuclear safety testing and system radiation effects studies. Fred was with the Electromagnetic Applications Division from 1983 until his promotion.

He has a BS and an MS in engineering from the University of Kansas. He participated in Sandia's Technical Development Program and has taken graduate courses in nuclear engineering at UNM.

Fred's spare time activities include playing squash and tennis, skiing, and winegrape growing. He and his wife Paulette have one child and live in the NE Heights.

* * *

CHARLES CARSON to supervisor of Tactical Warfare Studies Division II 9012, effective June 1.

Chuck joined the Labs in June 1968 as a systems engineer in the Exploratory Systems Development Department. He joined the Systems Analysis Department in 1975. In 1982 he transferred to the Geothermal Technology Division and returned to Exploratory Systems in 1986.

He has a BS and an MS in engineering sciences from Purdue University and an MS in math from UNM. He earned his PhD in operations research from Purdue through Sandia's doctoral study program (DSP).

Chuck has been an adjunct professor in the mechanical engineering department at UNM for the past eight years. He was a recruiter for Sandia at Purdue from 1977 to 1982.

His spare time activities include golf, soccer, tennis, running, and skiing. Chuck and his wife Cheryl have two children and live in the SE Heights.

Fun & Games

Golf — Results of the SWGA competition at UNM South Golf Course on June 7 are: A Flight: Pat Anderson (7522), first low net; Virginia Lathrop, second low net; Lana Lachenmeyer (2520), third low net; Ree Gerchow (122), fewest putts and longest drive; Phyl White (5122), second low putt; and Jennie Mirabal was closest to the pin. B Flight: Vonna Witten (2644), first low net and longest drive; Theresa Mills (3724), second low net and closest to the pin; Betty Turk (4000), third low net; Linda Dotson (9211), first low putt; and Lisa Herrington, second low putt.

* * *

Tennis — The next STA Tennis Tournament is set for June 27 & 28 at the Coronado Club courts. This is a Men's/Women's Doubles and Mixed Doubles event. For more information, contact Jerry Cap (1251) on 4-1213 or Marilyn Bange (DOE/POD) on 6-2048.

* * *

Running — The 10th Annual High Altitude Mini-Marathon (5-km and 20-km) Races are set for July 11 in Los Alamos. Both races start at 7:30 a.m. at 20th and Central and end at Deacon in downtown Los Alamos. The races are open to all runners of any age or ability. Entry fees are \$10 for the 20-km race and \$9 for the 5-km if registration is postmarked by July 6. Awards include medals and trophies. For more information, contact Terry Bisbee (2634) on 6-0389. LAB NEWS office (Bldg. 814) has entry forms.

Just Say Cheese



Who invented photography? More to the point, when did they do it? A new book could throw some light on this fascinating issue. The book is *The Age of Dinosaurs*, by Jane Burton and Dougal Dixon. But the best bit is the subtitle: "A photographic record." *New Scientist*



DECADE APART: '77 Ford Pinto (left) and other older cars will be in the first batch to be replaced by newer models such as this '87 Chevy Celebrity, according to Bill

Neil (on right), supervisor of Transportation Services Division 3423. Vic Chavez (3412) ran a few surveys on Sandia's motor pool to determine ways of making it easier for organizations to get the cars they need.

GSA Takes the Wheel

Motor Pool is Changing Hands

By July 1 Sandia's fleet of DOE vehicles will become GSA (General Services Administration) vehicles.

Once the conversion is completed, GSA will own the 700 or so passenger cars, pickups, vans, flat beds, and heavy trucks at Sandia. GSA will also perform repairs and preventative maintenance, supply oil and gas, and provide for disposal. In the past, DOE (or its predecessors) owned the vehicles; Sandia took care of the rest.

The upcoming fleet changeover at Sandia has been under consideration for more than a year, according to fleet manager Bill Neil (3423). Most of that time Vic Chavez (3412) has been the project leader responsible for weighing the options involved, and Geraldine Saucier (131) has been coordinating meetings on the financial policies and procedures.

The changeover was hastened by a 1986 law that requires fleet management either by GSA — an inter-agency fleet manager for the government since the 40s — or by "any other means less costly to the government."

Differences in Sight

Sandians won't notice much change in vehicle availability. "DOE formulas will still determine the total number of vehicles," says Bill.

However, he notes, there are visible changes, many of them positive:

- The waiting period for Sandia to obtain each batch of new vehicles will be much shorter — a year or less, rather than the two to three years that were required for the DOE/AL budget process. "60 percent of our fleet is more than seven years old," Bill says. "In three years, 90 percent of the current vehi-

Lots of Miles

Collectively, Sandia's fleet racks up almost 5 million miles a year — roughly 200 trips around the Earth at the equator — according to the motor pool's systems programmer, Gary Nez (3411).

cles will be replaced. The first shipment of '87 models — about 230 vehicles — should be in by the end of summer. Most of these will have air conditioning, and all will have power steering and power brakes."

- There will be more flexibility in selecting the vehicles needed. "For example," says Bill, "we can provide mini-vans to organizations that find 15-passenger vans too large for day-to-day use or replace 1/4-ton pickups with 3/4-ton trucks for those that need to carry more equipment in fewer trips."

- The justification for being assigned a new vehicle — or trading one for another — will no longer be a matter of odometer miles. Instead, the pri-

mary consideration will be need: how important a certain vehicle is in getting an organization's job done efficiently — "and, of course, how important that program is to Sandia's overall mission," Bill notes.

- Next weekend, license plates will change from an "E" series to "G." (The June 18 Weekly Bulletin provided details.)

- "For government use only" decals will read "General Services Administration" instead of "Department of Energy." The new decals will be attached only to windows so the vehicles can be resold without repainting.

- In Albuquerque, Bldg. 873 (corner of H and 12th Streets) will become the GSA office. That's where Sandians in Albuquerque will take vehicles for minor repairs and routine maintenance. (The GSA office is just a few dozen steps away from today's motor pool office in Bldg. 875.) For major repairs, GSA will shuttle vehicles to an off-Base site.

- Routines at Livermore will stay the same, but at Tonopah GSA will have an on-site representative.

Staying the Same

- The vehicle loan pool will be retained as is. About 25 vehicles will remain available for short-term use — from one day to three months.

- Assignments to organizations will continue to be made through Bill, supervisor of Transportation Services Division 3423. ●ID

June 30 Deadline

Scrape Off the Old, Stick on the New

If you drive on KAFB and you're a Sandia Albuquerque employee, retiree, or surviving spouse, you have until June 30 to affix your new decal(s) to your vehicle(s).

If you have any questions about the decals, call the Badge Office on 4-4726 or come to the Badge Office between 1 and 2:45 p.m.

Retirees and surviving spouses: It's true that the Benefits Division handled the initial mailing

of decals and any immediate changes, but as of June 30 those functions will be transferred to the Badge Office. To make a change in vehicle information, obtain a new decal, or destroy an old decal, go to the Badge Office (Bldg. 801 North) during the hours listed above.

Finally, the Badge Office and Benefits people involved with issuing the 18,000 new decals thank you for your patience and cooperation.

For Your Benefit

Recertify Class II Dependents by 6/30

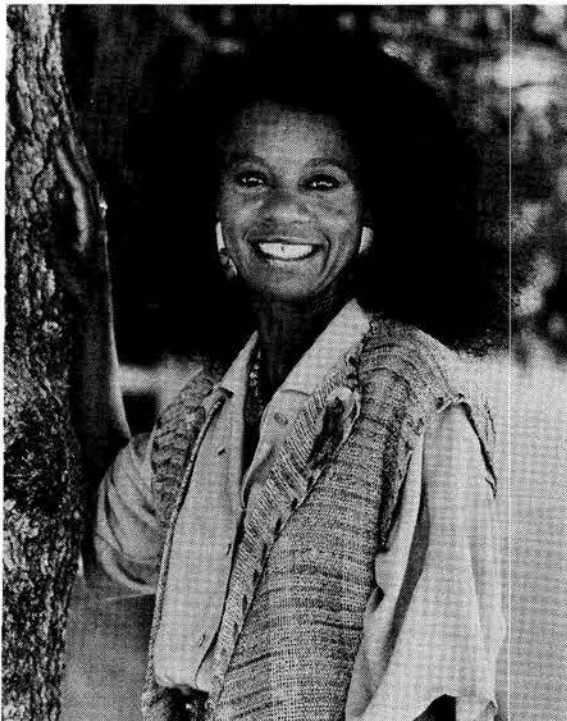
All Class II dependents enrolled in the Medical Care Plan before April 1, 1987, will lose their coverage on July 1 if their eligibility is not recertified by June 30.

If they are not recertified, there will be a break in coverage. This means they're not covered by your medical insurance. And if you re-enroll them later, coverage will cost you \$50 per month per Class II dependent.

Therefore, if you have a Class II dependent enrolled, please see Doris Mason, Benefits Div. 3543, Bldg. 832/East, to certify that your dependent continues to be eligible for coverage. (If you live outside the Albuquerque area, call Doris on 505/844-3545, FTS 844-3545.)

Participants enrolling new Class II dependents after January 1, 1987, will continue to be charged \$50 per month per enrollee. All Class II dependents enrolled before that date and continuously enrolled thereafter are not subject to the \$50 monthly payment.

(Generally, Class II dependents include your unmarried children over 24, your unmarried grandchildren, your brothers and sisters, and your or your spouse's parents and grandparents. Class II dependents must be financially dependent on you, must have lived in your home or one provided by you for at least the last six months, and must have a total income of less than \$7800 per year. For a more precise definition, see page 8 of your "Medical Care Plan" booklet, dated October 1986.)

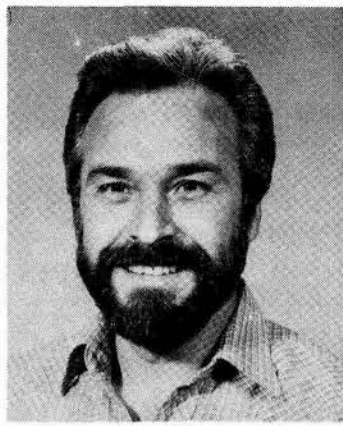


PATRICIA SALISBURY (3510) is one of nine New Mexicans who will receive the New Mexico Distinguished Public Service Award on June 26. The awards, to be presented by Gov. Garrey Carruthers, recognize contributions to the state and community. The Albuquerque section of the National Council of Negro Women nominated Patricia for the honor. She is public service chairwoman of Delta Sigma Theta sorority and serves on the Black Child Development Institute's steering committee, the Sickle Cell Board of Directors, and the National Association for Education of Young Children. At Sandia, she's chairperson of the Black Outreach Committee.

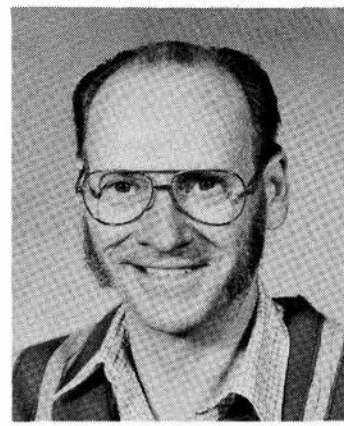
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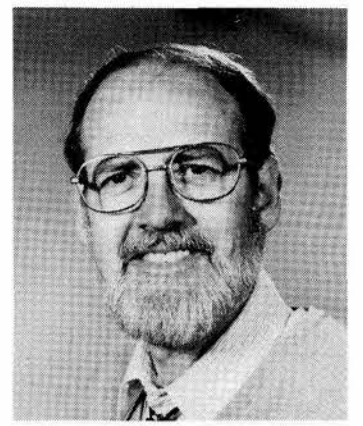
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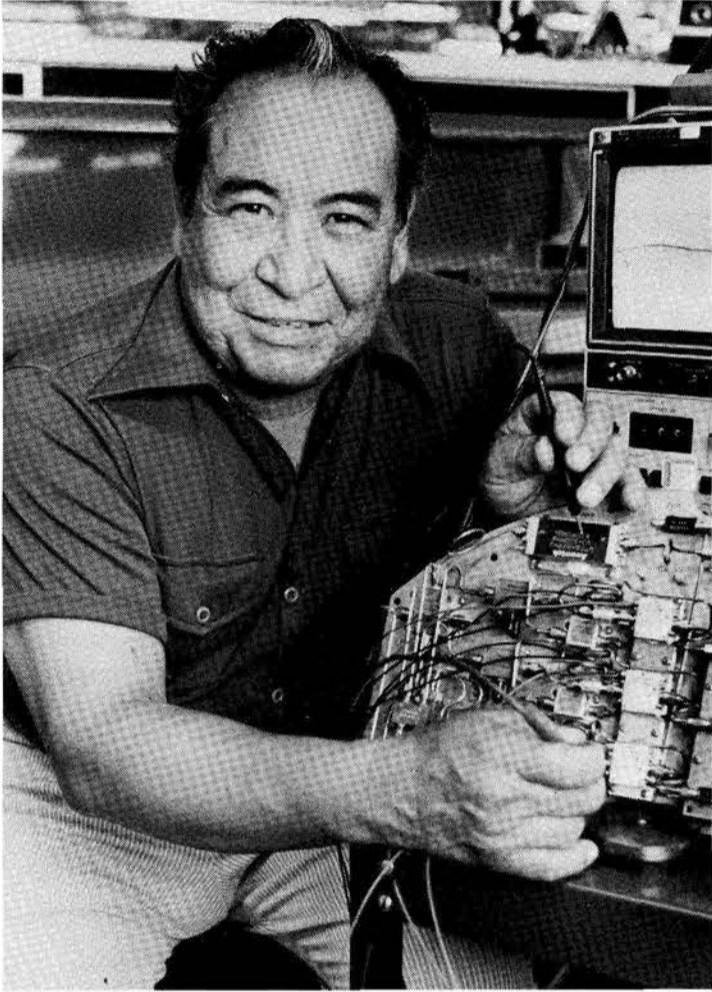
Danny Padilla (3743) 10



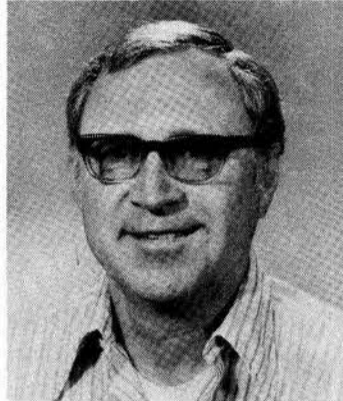
Charlie Barnes (2133) 30



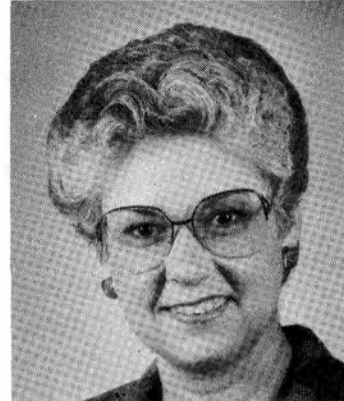
Ben Blackwell (1553) 20



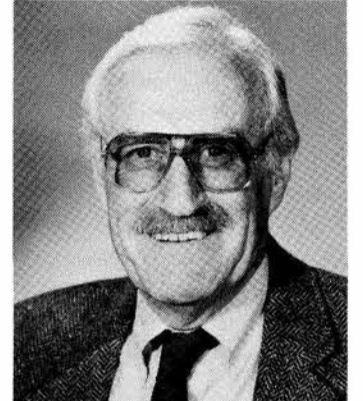
Gilbert Leyba (7412) 35



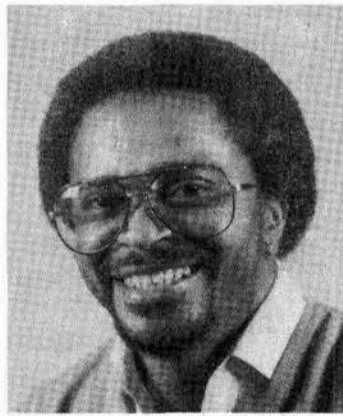
Bill Warren (1813) 25



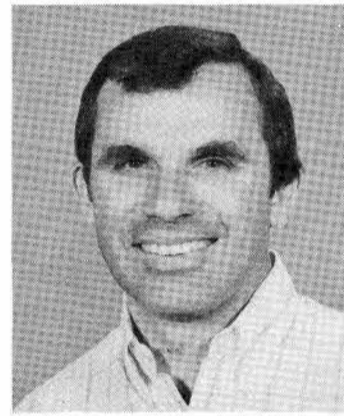
Jan Seibel (8264) 10



Jack Hueter (3523) 30



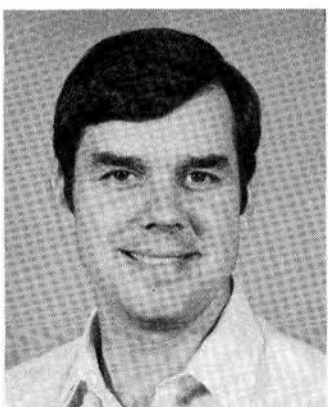
Paul Simmons (8262) 10



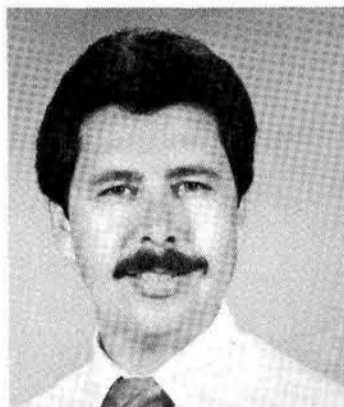
Craig Tyner (6226) 10



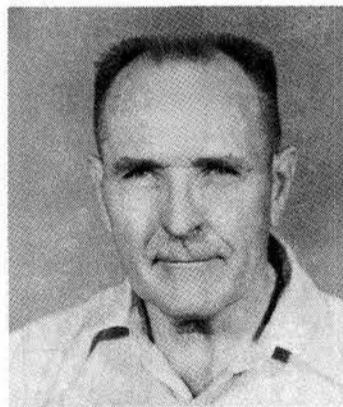
Carla Minichello (3426) 10



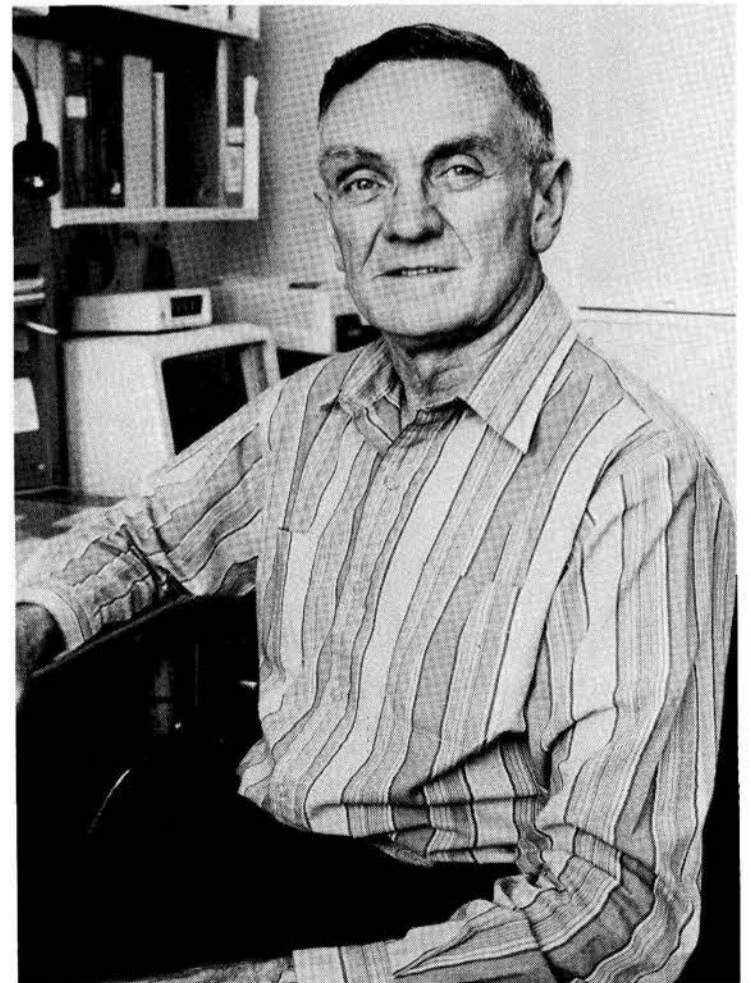
Jim Chapek (5249) 15



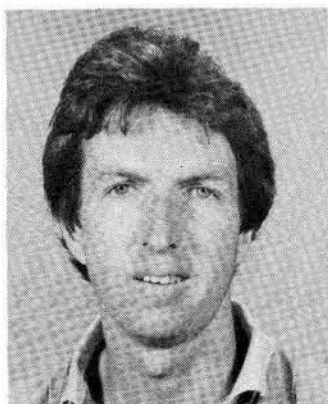
Gene Marquez (7400) 10



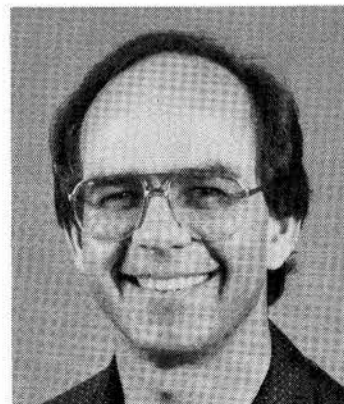
Elmer Pitts (7481) 35



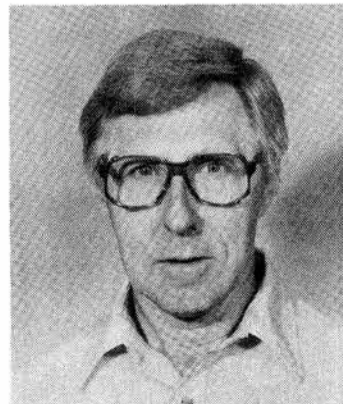
Walter Hyde (5252) 35



Larry Walker (9222) 10



Vern Byfield (8274) 25



Gerald Lis (7263) 25

Father's Day Fete Features Fantastic Food

AN UNPARALLELED PAPA PARTY is on tap this Sunday for families and their favorite dads from 11 a.m. to 6 p.m. in the pool/patio area. An a la carte BBQ spread that's fit for the king he is (as well as for the queens, princes, and princesses in the crowd) provides all kinds of tasty food from 11 to 5. Naturally there's music too, with the New Mexico Marimba Band playing its own special brand of tunes from 2 to 5. You'll want to bring along your bathing suits, your horseshoe and volleyball uniforms, or whatever, and plan to make a day of it. In honor of the occasion, all Club members are admitted to the pool free, so don't forget the membership card.

TAKE THE A-TRAIN over to the C-Club tonight to hear the fabulous Big Band sounds of Don Lesmen and Crew. They know and understand that 40s and 50s music, and you'll understand it too because the words make sense. Beforehand, the two-for-one special features filet mignon or fried shrimp — your choice of two entrees for \$14.95. If you don't already have a dinner reservation, get on board (265-6791).

ANOTHER SPLASH BASH provides all kinds of fun for every family member next Wednesday, June 24. Get out of the hot house and into the cool pool from 6 to 9 p.m. Don't bother cooking; the snack bar and grill stay open all evening long. Regular pool/patio admission rates apply: free for pool pass holders, \$1 per person for Club members without passes, and \$2 for guests. Family Pool Nights, something new this summer, give you another opportunity to enjoy that best-in-the-West pool facility.

THE GOOD NEWS is you can wing it to the sagebrush-shuffle strains of Western Flyer, a group right off the old Chisholm Trail, a week from tonight (June 26) from 8 p.m. to midnight. The bad news is there's no Friday night dinner special (sob!), because the C-Club kitchen undergoes some face-lifting (better known as renovation) from June 22 to July 5. All is not lost, however; Manager Sal promises lots of munchies to stoke you up while you're enjoying that fine country/western music.

SPEAKING OF FACE-LIFTS, the lunch-time crowd should take note as well: The kitchen shutdown means all weekday lunches are served on the patio during that period (June 22-July 5). Think of it as a bonus in disguise; there's no better place to spend a mid-day half hour than the shady, cool area just outside the back door at the Club.

IT'S STILL YOUR CHOICE, says Steven Curl of Dean Witter Reynolds. He invites you to come out to a seminar that explores your VCP distribution choices (in a self-directed IRA) next Thursday, June 25, from 4:30 to 5:45 p.m. in the Eldorado room. Refreshments served from 4:30 to 4:45. Give Steven an RSVP call at 898-5640.

IF YOU ENJOYED that home swim meet featuring the Coronado Aquatic Club last Saturday, plan to take in another one on Saturday morning, June 27, starting at 7:30 a.m. That's pretty early, we know, but if CAC members have the gumption to jump in the water at that time of day, the rest of us should be able to assemble a cheering squad.

MORE GOOD NEWS — The T-Bird card sharks aren't shutting down those wheel-and-deal sessions for the summer as they did last year. These good

sports are having so much fun, they've even cancelled their annual beat-the-dealer summer trip to Vegas. (After all, what does Tinsel Town have that we don't have right here — true, gang?) Last get-together this month is June 25, and it's back to the tables in July on the 9th. Action both days starts at 10:30 a.m.

SPEAKING OF THUNDERBIRDS, that group of on-the-go retirees plans another festive night on Tuesday, June 30. This time it's a pull-out-all-the-stops patio party starting at 6 p.m. A BBQ dinner for the low, low price of \$4.95 is served from 6 to 8, and a T-Bird favorite, smilin' Bob Banks, provides that mellow music from 7 to 10.

IT'S NOT TOO EARLY to start thinking about the C-Club Board of Directors election on Sept. 14. That's because the nominating committee is scurrying around at this very moment to find a list of first-class board candidates for the open positions. If you're interested in serving on the board, or know of someone else who is, jump on the bandwagon by calling Ken Sorenson (6322) on 4-5360 by July 1.

CLIMB EVERY MOUNTAIN — Well, maybe not every one. However, there are plenty of them to see during a blockbuster trip to Alaska in September. Two ways to go on this one: land/cruise or cruise-only. The land/cruise package (Sept. 8-20) covers city tours of Anchorage and Fairbanks; a visit to Denali National Park, where Mt. McKinley's located; a ride on the McKinley Explorer train; and a stern-wheeler cruise as part of your stay in Fairbanks. Cruise-only types join the rest of the happy crew on Sept. 13 for a week-long cruise aboard the *Regent Sea* along the coast of Alaska from Whittier to Vancouver. The land/cruise option costs \$2325/person (double); cruise-only is \$1642. Final payment due on July 20.

Speaking of exotic places, how does Halloween in Hawaii sound? The C-Club Travel Committee has put together a super sojourn to the land of leis and luaus from Oct. 30 to Nov. 9. Find out all about it at a preview meeting on Wednesday, July 8, at 7 p.m. in the C-Club dining room.



Here are a few current volunteer opportunities for employees, retirees, and family members. If you would like more information, call Karen Shane (3163) on 4-3268.

EIGHTH ANNUAL U. S. JUNIOR OLYMPIC VOLLEYBALL CHAMPIONSHIPS will be played in Albuquerque July 4-8. More than 200 teams from all over the U.S. will compete (200 games will be played each day during the event). The Olympic Committee needs help in the areas of court management, crowd control, tallying, etc.

ANIMAL HUMANE ASSOCIATION OF NEW MEXICO needs volunteers to participate in its Pet-Assisted Therapy program, which brings pets into health care facilities on a regular weekly schedule. These visits provide entertainment, diversion, and sensory stimulation for the lonely, aged, and infirm.

BRIGHT HORIZONS provides care and treatment to abused and neglected children. They and their parents receive individual and group therapy administered by a staff psychologist and family therapists. Bright Horizons needs volunteers who can make phone calls for donations of items for auction at its annual fund-raising event in August. Volunteers are also needed to help with Kids' Day Out, which involves taking a youngster to a Bright Horizons-planned activity on a Saturday.

Congratulations

To Cheryl and Ron (7542) Coleman, a daughter, Kristin Denise, May 16.

To Lee Ann Cavanaugh (122) and Tom Powell, married in West Springfield, Mass., May 23.

To Jo Non and Kevin (5165) Eklund, a daughter, Kyrstin Corine, May 30.

To Janet and Paul (6315) Kaplan, a son, Benjamin Joseph, June 2.

To Christine (141) and Chuck Abadie, a daughter, Lauren Christine, June 3.

To Nancy and Bob (6312) Prindle, a son, William Robert, June 5.

To Paula and William (7812) Holub, a son, Justin, June 7.

Welcome

Albuquerque

Kim Denton-Hill (3142)
Roxana Jansma (2612)
Patricia Mansker (2629)
James Ritson (9212)
James Stromberg (3532)

Arizona

David Cuyler (3313)
Tan Thai (5249)

California

Nisa Brown (6322)
Thomas Brown (6415)
Mark Derzon (1263)
Alan Galuska (1823)
Lane Yarrington (6315)

Florida

Edward Hoffman (7133)
Thomas Wubbels (3155)

Illinois

Gregory Wyss (6415)

Iowa

Guy Chun (9222)

Kansas

Deborah Sebring (5268)
Bruce Swanson (7526)

Mississippi

Timothy Devine (9243)
David Gelet (2312)

Missouri

Matthew Nixon (2311)
Gerald Terhune (9211)

New Mexico

Michael Nusser (7543)

Ohio

James Jones (7124)

Oklahoma

Chriswell Hutchens (2533)

Pennsylvania

Jill Werner (1414)

Texas

Micheal Glass (1512)

Washington

Martin Murphy (2812)